COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Southwest Regional Office

SIGNIFICANT MODIFICATION

STATEMENT OF LEGAL AND FACTUAL BASIS

Consolidation Coal Company - Buchanan Preparation Plant
State Route 632, Garden Creek, Buchanan County, Virginia
Permit No. SWRO10945

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Consolidation Coal Company has applied for a significant modification to the Title V Operating Permit for the Buchanan Preparation Plant facility. The Department has reviewed the application and has prepared a significant modification to the Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____
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Rob Feagins

Regional Director: _____ Date: _____
Dallas R. Sizemore

FACILITY INFORMATION

Permittee
Consolidation Coal Company
P.O. Drawer L
Oakwood, VA 24631

Facility
Buchanan Preparation Plant
Route 632
Garden Creek, Virginia

County-Plant Identification Number: 51-027-00081

SOURCE DESCRIPTION

NAICS Code: 212112 - Coal preparation

The facility cleans and dries coal prior to shipment by railcar or truck. The facility utilizes a coal-bed methane/coal-fired thermal dryer to dry the coal that is cleaned by the preparation plant, which includes froth flotation and vacuum filtration.

Air emissions from the facility include particulate matter (PM), and particulate matter with a mean diameter of less than or equal to 10 microns (PM-10) from all the dry processing units; volatile organic compounds (VOC) from wet coal processing; and, VOC, oxides of nitrogen (NO_X), sulfur dioxide (SO_2), carbon monoxide (CO) and hazardous air pollutants (HAP) from thermal drying.

The facility is a Title V major source of PM-10, VOC, CO, SO_2 and NO_x. This source is located in an attainment area for all pollutants. The facility is currently permitted under a PSD permit issued on July 30, 2004 (as amended August 24, 2005), and a Title V operating permit with an effective date of January 11, 2008 (as amended October 21, 2008).

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was completed on July 22, 2008. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility and DEQ entered into a Consent Order on October 31, 2008, to resolve a Notice of Violation alleging noncompliance with Title V operating permit Conditions III.B.9 – 12, pertaining to water supply pressure to the thermal dryer. In resolving the alleged violations and in accordance with Title V permit Condition III.B.11, Consolidation Coal Company submitted an application dated January 14, 2009, for a significant modification to their Title V permit requesting to change the minimum required water supply pressure. Consolidation Coal Company has complied with the requirements of the Consent Order, which was cancelled effective January 18, 2009.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device Description (PCD)	PCD ID	Pollutant(s) Controlled	Applicable Permit Date
S017	P002	Thermal Dryer #1 - Gas Firing	560 TPH	Venturi Scrubber	D022	PM/PM-10, SO_2	7/30/04 (as amended 8/24/05)
S017A	P002	Thermal Dryer #1 - Coal Firing	560 TPH	Venturi Scrubber	D022	PM/PM-10, SO_2	7/30/04 (as amended 8/24/05)

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.
TPH = tons per hour

EMISSIONS INVENTORY

A copy of the 2007 Pollutant Emissions Report is attached. Emissions are summarized in the following table:

Thermal Dryer (S017/S017A) Actual Emissions for 2007

	Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO_2	PM-10	NO_x
Total	64.95	33.94	0.0	30.78	33.94

EMISSION UNIT APPLICABLE REQUIREMENTS INVOLVING SIGNIFICANT MODIFICATION – THERMAL DRYER, EMISSION UNIT ID: S017/S017A

Monitoring

40 CFR Part 64 – Compliance Assurance Monitoring (CAM) applies to the thermal dryer for PM, PM-10, and SO_2 emissions. The CAM plan in the current Title V operating permit requires monitoring and measuring of, among other things, water supply pressure to the wet venturi scrubber. The current CAM plan defines an excursion as a water supply pressure of less than 20 pounds per square inch gage (psi). During a DEQ air quality inspection on July 22, 2008, the water supply pressure to the scrubber was noted to be 13.3 psi.

The permittee performed maintenance and adjustments to increase water supply pressure which included relining the surface of the conic section of the scrubber, adjusting the position of the fixed plate perpendicular to the water flow reducing the orifice to increase pressure, rebuilding the water supply pump, and verification of pump speed to original specifications. Water supply pressure after these and other minor adjustments is approximately 15 psi.

Results of thermal dryer stack tests conducted on October 14 and 15, 2008, indicate PM emissions ranged from 0.005 grains per dry standard cubic foot of exhaust gas (gr/dscf) to 0.007 gr/dscf. The PM emissions limit is 0.025 gr/dscf. The water supply pressure observed during those stack tests ranged from 15.1 psi to 15.7 psi. These performance test results document a need to modify the minimum value for the water supply pressure indicated in the CAM plan.

In accordance with 40 CFR 64.7(e) and Condition III.B.11 of the current Title V operating permit, the permittee has submitted an application for a significant modification to their Title V operating permit requesting a change in the minimum water supply pressure from 20 psi to 15 psi. 9 VAC 5-80-230 A.2 of Virginia air quality regulations indicates significant modification procedures are required to make this type change to a Title V operating permit.

Available information supports the requested change in the minimum water supply pressure to 15 psi. This change is reflected in the revised CAM plan highlighted in the following table which is included in the Title V operating permit. No other parts of the Title V operating permit have been changed as a result of this significant modification.

Thermal Dryer Compliance Assurance Monitoring Plan

	Indicator No. 1	Indicator No. 2	Indicator No. 3	Indicator No. 4
I. Indicator	Exhaust Gas Temperature	Pressure Loss	Water Supply Pressure	Thermal drying chamber temperature
A. Measurement Approach	Temperature probe	Differential pressure gage	Pressure gage	Temperature probe
II. Indicator Range	An excursion is defined as an exit gas temperature greater than 160 °F	An excursion is defined as a pressure loss through the scrubber of less than 21.7 inches water column	An excursion is defined as a water supply pressure of less than **15 pounds per square inch gage**	An excursion is defined as a drying chamber temperature greater than 1,400 °F
III. Performance Criteria A. Data Representativeness	The temperature probe monitors the temperature of the gas at the exit of the thermal dryer	The differential pressure gage monitors the static pressures upstream and downstream of the scrubber's venturi throat	The water pressure gage monitors water supply pressure to the scrubber. The gage is to be located close to the water discharge point.	The temperature probe monitors the temperature at the entrance to the drying chamber (just below the restriction deck) of the thermal dryer
B. Verification of Operational Status	The monitoring device shall be installed and calibrated according to manufacturer's recommendations prior to initial performance tests	The monitoring device shall be installed and calibrated according to manufacturer's recommendations prior to initial performance tests	The monitoring device shall be installed and calibrated according to manufacturer's recommendations prior to initial performance tests	The monitoring device shall be installed and calibrated according to manufacturer's recommendations prior to initial performance tests
C. QA/QC Practices and Criteria	The device is to be certified by the manufacturer to be accurate within ±3° Fahrenheit and calibrated annually based on the manufacturer's recommendations	The device is to be certified by the manufacturer to be accurate within ±1 inch water gage and calibrated annually based on the manufacturer's recommendations	The device is to be certified by the manufacturer to be accurate within ±5% of design water supply pressure and calibrated annually based on the manufacturers recommendations	The device is to be certified by the manufacturer to be accurate within ±3° Fahrenheit and calibrated annually based on the manufacturer's recommendations
D. Monitoring Frequency	Measure continuously	Measure continuously	Measure continuously	Measure continuously
E. Data Collection Procedures	Record continuously on a chart recorder	Record continuously on a chart recorder	Record continuously on a chart recorder	Record continuously on a chart recorder
F. Averaging Period	None	None	None	None

The monitoring proposed in the revised CAM plan complies with monitoring required by 40 CFR Part 60, Subpart Y, Standards of Performance for Coal Preparation Plants and Conditions 4 and 5 of the PSD permit.

The indicators to be monitored reflect the performance of the venturi scrubber and thermal dryer. The range of operation for each indicator is based on manufacturer design and performance test data. The permit contains requirements for performance tests for emissions of PM, PM-10 and SO_2 from the thermal dryer once every two years. Performance test data will be used to verify the accuracy of each indicator range so that ongoing compliance with the emission limits can be reasonably assured. Operation of the thermal dryer and venturi scrubber so that each indicator is maintained within the appropriate range will provide a reasonable assurance of compliance with the emission limits for the subject pollutants.

PUBLIC PARTICIPATION

In accordance with 9 VAC 5-80-230 D, a public notice regarding the draft significant modification was published in the *Virginia Mountaineer* newspaper in Grundy, Virginia, on February 19, 2009, and public comments were accepted for 30 days thereafter. All persons on the Title V mailing list were provided a copy of the public notice by e-mail, postal mail, or facsimile. No comments were received from the public.

In accordance with 9 VAC 5-80-230 C, the U.S. Environmental Protection Agency (EPA) was provided a copy of the draft permit, Statement of Basis and public notice by e-mail on February 13, 2009. The draft permit was sent to the USEPA for concurrent review as a proposed permit. The EPA 45-day review period ended on April 5, 2009. No comments were received from the EPA.

A copy of the public notice was sent to the affected states, including West Virginia, Kentucky, North Carolina, and Tennessee by postal mail on February 13, 2009. No comments were received from the affected states.